

COMMENT: DO ENVIRONMENTAL LAWS ADEQUATELY PROTECT CHILDREN'S ENVIRONMENTAL HEALTH? A REVIEW OF EXISTING LAWS, POTENTIAL LEGISLATION, AND POLICY CONSIDERATIONS

Jennifer C. Miner [FNa1]

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In recent years, protecting children from environmental hazards has become a national and international movement, stimulating action from government leaders, non-profit organizations, industry representatives, and concerned citizens. Implementing current laws and regulations designed to safeguard children's health and providing appropriate funds and evaluation mechanisms is necessary to ensure the environmental health of children. Additionally, all possible adverse effects on children's environmental health, stemming from government or industry imposed standards, laws, or regulations should be completely studied and evaluated prior to passage. The Physicians for Social Responsibility, a non-profit organization consisting of members of the medical community dedicated to promoting global health and eradicating global pollution, stated:

Our children are especially at risk. Their growing bodies are more vulnerable to harm from hazards in the environment. Small amounts of air or water pollution that may have little or no impact on a healthy adult can make children, especially newborns, seriously ill. Children's longer lives also make them more vulnerable to slow-acting hazards, like pesticides and dioxins. . . . Yet most health and environmental standards are set to protect the average, healthy adult, not children, or millions of others more vulnerable to environmental hazards. . . . Clearly, these hazards require national action by our elected officials in Washington, if not for ourselves, at least for our children. [FN1]

***1102** The first correlation between environmental hazards and children's health was recognized in 1776 when London physician Percival Pott noted the high incidence of cancer in young chimney sweeps. [FN2] The United States Congress, however, did not pass legislation specifically addressing children's health until the Food Quality Protection Act [FN3] and Safe Drinking Water Amendments were passed in 1996. [FN4] The Executive Branch also made children's health a national priority on April 21, 1997, when President Clinton enacted Executive Order 13,045 on the Protection of Children from Environmental Health Risks and Safety Risks. [FN5] Recently, the United States Environmental Protection Agency (EPA) made protecting children from environmental threats a specific priority on its national agenda. [FN6]

The movement to protect children from environmental hazards received international attention when world leaders enacted the 1997 Declaration of the Environment Leaders of the Eight on Children's Environmental Health, [FN7] and the United Nations emphasized children's health at World Health Day in 1998. [FN8] Since "an estimated 40 percent of world deaths can now be attributed ***1103** to various environmental factors, especially organic and chemical pollutants," both national and international action is necessary. [FN9]

This Comment discusses why legislators and other policy makers should consider children's special vulnerabilities when developing environmental laws and standards, analyze potential threats to children's environmental health, and evaluate childhood diseases and health problems due to environmental hazards. Next, the Comment discusses the only two laws that expressly incorporate children's health provisions, as well as Presidential and administrative agency actions which increase children's protection from environmental hazards. Then, the Comment reviews and evaluates legislation currently in Congress and examines recent international actions and declarations. Finally, the Comment presents recommendations for reform.

I

Why Children Should Not Be Treated As "Little Adults"

Because of inherent differences in physical characteristics, social conduct, and behavioral environments, children are more heavily exposed to toxic environmental hazards than adults:

Pound for pound of body weight, children breathe more air, drink more water, and eat more food than adults. In addition, their behavior patterns, such as play close to the ground and hand-to-mouth activities, can increase their exposure to potential toxics in the environment. Furthermore, the systems of a child's body are still developing making children less able to metabolize, detoxify, and excrete some toxic substances than adults. [FN10]

***1104** The following discussion describes some of these differences between children and adults. [FN11]

A. Greater Exposure

Children are exposed to toxins more frequently than adults due to differences in intake and behavior. For example, in the first six months of life, a child drinks seven times more water per pound of body weight than an average adult. [FN12] An infant's daily water consumption from drinking formula is equal to an average adult male drinking thirty-five cans of soda pop per day. [FN13] According to United States Department of Agriculture (USDA) national food consumption surveys, the typical one year old drinks twenty-one times more apple juice, eleven times more grape juice, and five times more orange juice than the average adult. [FN14] The USDA also estimates that the average one year old consumes two to seven times more grapes, bananas, peanuts, apples, strawberries, tomatoes, potatoes, pears, carrots, and broccoli than an adult. [FN15] Additionally, children's behaviors differ from adults' behaviors; children more frequently engage in hand-to-mouth contact and play closer to the ground, thus increasing their exposure to toxins, dust, soil, and carpets. [FN16]

B. Increased Susceptibility

Another reason children should not be treated as "little adults" is because their bodies are still growing and developing. [FN17] Children's developmental processes can be easily disrupted, [FN18] and their "metabolic pathways, especially in the first months after ***1105** birth, are immature compared with those of adults." [FN19] Since children have developing endocrine, immune, and nervous systems, children typically absorb, metabolize, and excrete toxins less efficiently than adults. [FN20]

II

Threats to Children's Environmental Health

A. Lead

According to a 1997 report by the Center for Disease Control and Prevention, over 900,000 children had unacceptably high blood lead levels between 1991-1994. [FN21] These high lead levels are cause for great concern because elevated lead levels in blood have been shown to slow intellectual development and increase aggressive behavior in children. [FN22] Although lead was phased out of gasoline in 1976, resulting in decreased levels of lead in human blood by more than eighty percent, many children still have dangerously high levels of lead in their blood. [FN23] Children are exposed to lead poisoning by eating lead paint chips present in some houses that were built before 1978, drinking water contaminated with lead, breathing airborne lead, and playing near hazardous waste sites. [FN24] Although very significant, the scope and impact of lead reduction laws are beyond the focus of this Comment and will not be directly addressed. [FN25]

B. Air Pollution

Both outdoor and indoor air contains pollutants that may affect children, especially those children with asthma. [FN26] In particular, urban air pollution contributes to increased asthma attacks; in 1995, thirty-three percent of United States cities did not meet EPA air quality standards for ozone, carbon monoxide, nitrogen ***1106** dioxide, sulfur dioxide, particulate matter, and lead. [FN27] In response to evidence that twenty year old air quality standards do not adequately protect asthmatics and children, the Clinton Administration strengthened the ozone standard. [FN28] The EPA estimates that the new standards will save at least fifteen thousand lives per year and protect an additional thirty-five million children. [FN29]

C. Pesticides

The Agency for Toxic Substances and Disease Registry (ATSDR) estimates that fifty percent of all pesticides [FN30] a person will ingest in his or her lifetime are ingested within the first five years of life. [FN31] The

ATSDR also reports that when fetuses and children are exposed to pesticides they are more likely to have damaged endocrine, immune, nervous, reproductive, and respiratory systems; develop cancer; and encounter birth defects. [FN32] The EPA estimates that children develop leukemia three to nine times more often when pesticides are used around their homes, and has linked brain tumors and other cancers to insecticide exposure. [FN33] In addition, children may also develop short-term illnesses from pesticide exposure, including vomiting, abdominal pain, twitching, diarrhea, and profuse sweating. [FN34]

Children are exposed to pesticides through dermal, airborne, and dietary mechanisms. [FN35] When children play with dirt and plants sprayed with pesticides, they take in pesticides through the skin. [FN36] Children also introduce toxins into their bodies by *1107 breathing pesticide-contaminated air. [FN37] Additionally, children directly ingest pesticides by eating food and drinking water and breast milk containing pesticide residue. [FN38]

D. Drinking Water Contamination

Although the nation's drinking water supply from public water systems has greatly improved since the Safe Drinking Water Amendments (SDWA), [FN39] the public should still be concerned by the potential for microorganisms, pesticides, heavy metals, disinfection by-products, and radon to appear in drinking water. [FN40] Even with the tougher standards of the SDWA, communities still experience waterborne disease outbreaks and arsenic and pesticide residue in water supplies. [FN41]

E. Living Near Hazardous Landfills

Approximately ten million children under the age of twelve live within four miles of a toxic waste dump. [FN42] The National Institute for Environmental Health Sciences of the National Health Institutes (NIEHS) has correlated living near hazardous waste sites with low birth rates and premature births. [FN43] At a hazardous landfill site in New Jersey, once ranked first on the National Priorities List (NPL), mothers living within one kilometer of the site were twice as likely to have premature infants than were mothers not living near the site. [FN44] On average, mothers living near the site had infants weighing two to four ounces less than the average newborn, and the closer the mother lived to the site, the lower the birthweight. [FN45]

*1108 F. Other Environmental Factors

There are additional environmental factors which may have an impact on children's health, including asbestos, environmental tobacco smoke, harmful materials in toys, power lines, and radon, all of which are beyond the scope of this Comment. [FN46]

III

Childhood Diseases and Health Problems Due to Environmental Impacts

A. Cancer

Every year, eight thousand children under the age of fifteen are diagnosed with cancer, [FN47] and unfortunately, the cancer rate is increasing for children. [FN48] Although cancer is the most curable chronic childhood disease, with cure rates of approximately eighty percent, [FN49] cancer is one of the leading causes of death in children. [FN50] The most significant increases occur in children aged one through five; in the past fifteen years, childhood incidences of acute lymphocytic leukemia are up ten percent and brain tumors are up a startling thirty percent. [FN51] Although experts agree that most adult cancers are due to lifestyle factors such as smoking, diet, and occupational hazards, many causes of cancer in children are unknown. [FN52] However, significant associations have *1109 been shown between certain environmental factors and cancer rates for children, thereby demonstrating a direct correlation between cancer and exposure to ionizing radiation, chemotherapy, and carcinogens such as dioxins. [FN53] Other possible environmental factors that increase children's cancer risks are exposure to asbestos, environmental tobacco smoke, hazardous waste, pesticides, radon, solvents, ultraviolet light, and x-rays while in utero. [FN54] As mentioned previously, children are also more likely to develop cancer when pesticides are used around the home. [FN55]

B. Asthma and Respiratory Diseases

Asthma attacks, or breathing difficulties caused by the narrowing of airways in the lungs, are "commonly set off by 'triggers' in children who have a genetic or acquired predisposition to the disease." [FN56] In the decade from 1982-1992, asthma rates increased by an age-adjusted forty-two percent, making asthma the leading chronic illness in children under eighteen. [FN57] The EPA reports that deaths from asthma increased a staggering 118% from 1980 through 1993. [FN58] Both indoor and outdoor air pollutants are common asthma "triggers." Indoor pollutants include allergens, carbon monoxide, environmental tobacco smoke, nitrogen oxides, and volatile organic compounds. [FN59]

C. Endocrine Disorders

Chemicals such as polychlorinated biphenyls (PCBs), dioxins, triazine herbicides, dichloro-diphenyl-trichloro-ethane (DDT), dithiocarbamates, tamoxiphen, and phytoestrogen have the *1110 greatest potential for disrupting endocrine systems. [FN60] Endocrine-disrupting chemicals introduced into the environment may cause reproductive dysfunction, sexual abnormalities, metabolism disorders, decreased learning and memory skills, and slow psychomotor development. [FN61] These unfortunate complications lead to significant defects in children's sensory, motor, and cognitive functions. [FN62]

D. Neurodevelopmental Effects

Neurotoxic substances, which are chemical compounds that may have harmful effects on the brain and nervous system, may cause behavioral and mood problems, birth defects, changes in intelligence, and reproductive disorders. [FN63] Lead, mercury, and PCBs have all been shown to contribute to abnormal neurodevelopment. [FN64] Exposure to these substances is especially damaging to a child during his or her first few years of life, because adverse impacts on a child's rapidly developing and immature system may cause enduring damage and may affect his or her ability to neutralize and excrete toxins. [FN65]

IV

Laws and Regulations Incorporating Children's Health Provisions

A. Food Quality Protection Act

1. Passage of the Law

The Food Quality Protection Act of 1996 (FQPA), [FN66] was unanimously passed by Congress on August 7, 1996, representing one of the first laws to specifically consider children's environmental health. [FN67] The law was spurred by the National Research Council's *1111 National Academy of Sciences Report: Pesticides in the Diets of Infants and Children, [FN68] which supported environmentalists' concerns that children are more vulnerable than adults to pesticide exposure. The NRC Report made four important recommendations regarding pesticide regulation: (1) pesticide exposure residues should reflect the unique dietary characteristics of children and infants; (2) EPA assessment techniques should take into account all non-dietary pesticide intakes; (3) risk assessment procedures should consider the cumulative effects of multiple pesticides with common toxic effects; and (4) the EPA should use a tenfold uncertainty factor for fetal developmental toxicity when there is evidence of post-natal developmental toxicity or incomplete data. [FN69]

FQPA amends the Federal Food, Drug, and Cosmetic Act (FFDCA) [FN70] by requiring the EPA Administrator to specifically consider the exposure of children and infants when setting tolerances for pesticides. [FN71] A tolerance is "the maximum amount of pesticide residue that is allowed by law to remain in or on raw agricultural commodities." [FN72] When "establishing, modifying, leaving in effect, or revoking a tolerance or exemption for a pesticide chemical residue," the EPA Administrator is directed to evaluate the risk of a pesticide chemical residue based on available information. [FN73] The Administrator shall consider the following factors in its analysis: (1) infants' and children's consumption *1112 patterns "that are likely to result in disproportionately high consumption of foods containing or bearing such residue among infants and children in comparison to the general population"; (2) the special susceptibility of infants and children to pesticides, including neurological differences and in utero effects; and (3) the cumulative effects of pesticide residue and other toxic substance exposure on children. [FN74] This provision of the FQPA mandates that the Administrator specifically take infants' and children's unique needs into consideration when approving pesticide use.

Additionally, the Administrator must also "ensure that there is a reasonable certainty that no harm will result to infants and children from aggregate exposure to the pesticide chemical residue; and [publish] a specific determination regarding the safety of the pesticide chemical residue for infants and children." [FN75] This "reasonable certainty of no harm" standard must include an additional tenfold margin of safety for infants and children, and the standard must take into account potential pre- and post-natal toxicity, as well as the completeness or incompleteness of data being used. [FN76]

When assessing pesticide risks, the EPA has historically taken "the lowest level of a substance that produces no observable adverse effects in test animals . . . and divides it by an uncertainty factor to set a safe level for humans." [FN77] Historically, the EPA has used an uncertainty factor of 100 "to account for the fact that humans may be more sensitive than test animals and certain subpopulations may be especially sensitive" to pesticides. [FN78] The FQPA directs the EPA to apply an additional safety factor of ten to protect children, unless the EPA determines that a lower margin will ensure the safety of children. [FN79] In theory, this limits pesticide residues to lower levels than those at which trace amounts would not affect the nervous, immune, or reproductive systems *1113 of test animals. [FN80] However, the Administrator is allowed to use a different margin if such margin will ensure the safety of infants and children. [FN81] In other words, "FQPA directs the Administrator to apply a 'tenfold margin of safety' to the safe level of a residue for threshold effects" but may choose an alternative margin if reliable data shows that another standard is appropriate. [FN82] These wide discretions in standard setting has led to criticisms of FQPA. [FN83]

2. Criticisms of FQPA

The Children's Environmental Health Network (CEHN), a non-profit organization that promotes children's health through advocacy and research, states that "[s]ince the passage of FQPA, [the] EPA has eliminated or lessened the 10-fold [sic] safety factor in the vast majority of the pesticide tolerances reviewed by the agency," partially because reliable data does not exist for choosing a lesser margin of safety. [FN84] When considering the validity, completeness, and reliability of pesticide data, the EPA must measure the nature of the toxic effects, cumulative and aggregate exposure information, variabilities in sensitivities of major identifiable *1114 subgroups, information on endocrine disruption effects, and appropriate safety factors. [FN85] Although these provisions provide general guidance, many toxicity tests are crude, outdated, and insensitive, leading to sparse data on actual pesticide exposure of infants and children. [FN86] The Physicians for Social Responsibility suggest that the EPA use the most sensitive and sophisticated tests available to ensure reliable data. [FN87] However, FQPA provides no funding with which to generate data [FN88] on infants' and children's actual pesticide exposure levels.

Another criticism of FQPA is that the EPA uses a risk-benefit analysis to regulate pesticides, rather than considering only health risks as do the majority of other environmental laws. [FN89] The Act provides that "[o]nce the EPA calculates a pesticide's risks and benefits, the Agency weighs the risks and benefits against one another to decide whether a chemical's benefits justify tolerance approval, given the health risks. . . ." [FN90] At first glance, this seems to reasonably balance the benefits of pesticide use in the form of increased crop production and protection of children's health; however, this "balancing" standard is subject to outside lobbying and political influences which may place pesticide benefits above potential risks to children and other vulnerable subpopulations. When one takes into consideration the intuitive decisions involved in this analysis, coupled with its data inadequacies and methodological shortcomings, the risk-benefit standard is discretionary and nebulous. [FN91] After all, how does an agency place a value on a child's life and health and figure it into a balancing equation?

Although FQPA allows any person to file a petition to establish, modify, or revoke a tolerance or exemption for a pesticide chemical residue, the petition must be detailed and include comprehensive *1115 scientific tests and evidence in support of the proposal. [FN92] This may, in practice, impede persons from petitioning the EPA when they do not have the resources to perform detailed analyses; for example, smaller "watchdog" organizations and private citizens may not have the capacity to petition the EPA and challenge test results conducted by large pesticide and agricultural chemical companies. [FN93]

3. Praises of FQPA

Despite its criticisms, FQPA is an important step in protecting children's environmental health and recognizing the different susceptibilities to health risks between adults, infants, and children. According to one commentator, the "flexible statutory language [of FQPA] should produce a more adaptive and dynamic regulatory process that is able to implement sound scientific evidence more easily and prevent years of misallocated resources and unregulated

risks." [FN94] The Act also demonstrates that Congress recognizes the nexus between environmental hazards and dangers to children's health.

B. Safe Drinking Water Amendments

Congress enacted the Safe Drinking Water Amendments (SDWA) on August 6, 1996, because "safe drinking water is essential to the protection of public health." [FN95] In passing SDWA, Congress recognized that the existing processes for assessing drinking water contaminants and setting drinking water standards were inadequate and exceeded the financial and technical *1116 capacity of some public water systems. [FN96] Additionally, SDWA aimed to use "sound science" in establishing drinking water regulations and setting priorities by utilizing risk assessment and cost-benefit analysis. [FN97] SDWA also provides for greater public education and participation [FN98] by enacting right-to-know provisions that require drinking water officials to disclose contamination problems to customers by mail in an easy-to-understand manner. [FN99] The bill also allocates billions of dollars to improve water treatment and protect water sources from pollution. [FN100]

Furthermore, SDWA requires the EPA Administrator to promulgate a national primary drinking water regulation for contaminants if such contaminants have an adverse effect on public health, the contaminants are known to occur or will likely occur in public water systems at hazardous levels, and the regulation of such contaminants will reduce health risks for persons served by public water systems. [FN101] SDWA also directs the Administrator to develop a list of unregulated contaminants that may require regulation no later than eighteen months after the enactment of SDWA and every five years thereafter, including, but not limited to, substances referred to in the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). [FN102] In addition, the Administrator must also select unregulated contaminants for regulation that present the greatest health concern, considering:

[T]he effect of such contaminants upon subgroups that comprise a meaningful portion of the general population (such as infants, children, pregnant women, the elderly, individuals with a history of serious illness, or other subpopulations) that are identifiable as being at greater risk of adverse health effects due to exposure to contaminants in drinking water than the general population. [FN103]

When determining which contaminants will be regulated, the Administrator shall use the best available, peer-reviewed science. *1117 [FN104] The Administrator shall also undertake a health risk reduction analysis, balancing the quantifiable and nonquantifiable costs and benefits of regulation. [FN105] Again, the Administrator must consider the effects of the contaminant on infants, children, and other vulnerable subpopulations, as these groups may be at an increased risk for adverse health effects due to their special susceptibilities. [FN106] The Administrator must consider all relevant factors in his or her analysis, including the effect of co-occurring contaminants, treatment techniques, and consumer willingness (or unwillingness) to pay for reductions in health risks from drinking water contaminants. [FN107]

As a result of these Amendments, the EPA estimated that in 1999 "[eighty- eight] percent of the American population will receive drinking water from community water systems that meet all health-based standards in effect since 1994." [FN108] SDWA appears to be having a positive effect, as well as taking children's environmental health into consideration. According to the National Resources Defense Council, "America's drinking water is safer than it has been in decades, and of better quality than that of many other countries." [FN109] However, the EPA must continue to be diligent in advising the public about the methods and calculations used to ensure safe drinking water; otherwise, the EPA will not know whether the public is willing to accept certain levels of contaminants in their drinking water. Public system drinking water consumers must be allowed to perform their own risk-benefit analysis to determine if the risks of having contaminants in the water outweigh the benefits of a lower price. Furthermore, the EPA must make this information public, including information about the potential adverse effects of contaminants on the general population, children, and other vulnerable subpopulations.

*1118 V

Executive Branch Actions

A. Executive Order 13045

On April 21, 1997, President Clinton signed Executive Order 13045 on the Protection of Children from Environmental Health Risks and Safety Risks. [FN110] The Order directs each federal agency to "make it a high

priority to identify and assess environmental health risks and safety risks that may disproportionately affect children [and to] ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks." [FN111] The Executive Order applies if the action is economically significant, that is, has an annual effect on the economy of at least 100 million dollars; [FN112] and if the action has material, adverse effects on the "economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities; and concern[s] an environmental health risk or safety risk that an agency has reason to believe may disproportionately affect children." [FN113] The Order requires that agencies submitting regulatory actions to the Office of Information and Regulatory Affairs [FN114] provide "an evaluation of the environmental health or safety effects of the planned regulation on children; and . . . an explanation of why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the agency." [FN115]

As required by the Order, a Task Force on Environmental Health Risks and Safety Risks to Children was created, and the Secretary of the Department of Health and Human Services (HHS) and the Administrator of the EPA act as co-directors. [FN116] The Task Force is charged with recommending federal strategies to the President to promote children's environmental health and *1119 safety; developing an agenda for coordinated research; suggesting partnerships between federal, state, local, and tribal governments and the private, academic, and non-profit sectors; preparing proposals for public outreach and communication; and identifying high priority initiatives. [FN117] The Task Force has formed four federal strategy workgroups to achieve the Executive Order's objectives. [FN118] The groups focus on asthma, unintentional injuries, cancer, and developmental disorders, which include birth defects, neurobehavioral disorders, and endocrine disruption. [FN119]

In 1998, the EPA and HHS funded eight centers at leading research institutions to further the objectives of the Executive Order. [FN120] These centers are dedicated to the protection of children's health from environmental threats. The centers focus on the environmental causes of children's illnesses and disorders, [FN121] and were selected by a peer review process. Each center will receive between \$1.2 and \$1.5 million to address two of the most significant areas concerning children's environmental health: asthma and pesticide exposure. [FN122]

*1120 B. Agency Actions to Protect Children

1. EPA

According to Carol Browner, the current EPA Administrator, the EPA is entering a "new generation of environmental protection" [FN123] and plans to work with industry, the private sector, and public governments to achieve a safer environment. [FN124] The EPA has pledged to take the unique vulnerabilities of children into account when setting public health environmental standards, because "[children] are small, they are growing, they react differently to environmental hazards." [FN125] Furthermore, Browner states that the Clinton Administration does not want public health standards based solely on a "single economic cost-benefit analysis," [FN126] in contrast to the FQPA standard.

a. Safe Food

To illustrate EPA's commitment to children's environmental health protection, the agency has made safe food a Strategic Plan goal. By the year 2005, the EPA aims to reduce the risk from agricultural use of pesticides from 1995 levels by fifty percent and eliminate the use of pesticides that do not meet the "reasonable certainty of no harm" standard. [FN127] The Agency plans to revise risk-assessment practices to ensure adequate protection of children's and other vulnerable sub-populations' health and reconsider approximately 9,700 tolerances for specific pesticide residues. [FN128] The EPA expects to reduce the use of high hazard pesticides by "doubling the annual rate of registrations for safer new chemical pesticides and biopesticides from 1995 levels." [FN129]

Although the EPA plans to encourage the use of lower risk *1121 pesticides and pest-management practices to help eliminate high hazard pesticides, it seems contradictory that the EPA endorses doubling the annual registration rate of "safe" pesticides to achieve this goal. A more appropriate method of pesticide reduction might be to decrease the amount of pesticides used and total number of registrations authorized. Another problem with the EPA's plan is that there are few concrete standards to measure the extent to which the agency's goals are accomplished. The only way the EPA plans to evaluate the results of the safe food program is by measuring program outputs and the number of registrations, re-registrations, and tolerance reassessments. [FN130]

b. National Agenda

The EPA has developed a national agenda to protect children's environmental health. The Agenda comprised of the following principles:

1. Ensure that standards set by the EPA protect children from heightened risks.
2. Develop a scientific research strategy which focuses on gaps in knowledge regarding children's susceptibility and environmental pollutant exposure.
3. Develop comprehensive policies to address cumulative and simultaneous exposures faced by children.
4. Expand community right-to-know procedures that will allow families to make informed choices regarding environmental pollution and exposure.
5. Encourage parental responsibility by providing parents with the necessary information to protect their children from environmental health risks.
6. Encourage and expand the cooperation between health care providers and environmental professionals in order to identify, prevent, and reduce environmental health hazards to children.
7. Provide the necessary funding to ensure that protecting children's environmental health is a top priority. [FN131]

When making policies and setting standards, the EPA shall consider children's unique characteristics; develop analytical methods to better estimate children's exposure to environmental hazards; improve risk assessment procedures; create age-based, health, and vulnerability indices; and increase environmental health education to children, parents, and teachers. [FN132] By using *1122 updated scientific methods that focus on children, encouraging greater education, and eliminating ultra-hazardous pesticides, the EPA hopes to increase the safety of the nation's food supply, ultimately increasing the safety to children.

c. Challenges Facing the EPA in Regards to Children's Environmental Health

In order to ensure children's environmental health, the EPA must also utilize adaptable methods, multi-disciplinary approaches, and efficient analyses to be effective. [FN133] The EPA must improve communication with the public "to ensure awareness of EPA's position and rebuild trust and credibility in the agency." [FN134] Otherwise, the "failure of EPA to develop and adopt more effective risk assessment models that make use of state of the art understandings of risk etiology will result in inaccurate and dangerously misleading risk estimations." [FN135]

In her article, *The EPA's National Agenda to Protect Children's Health from Environmental Threats: The Trend to Better Protect Our Nation's Children from Environmental Health Hazards*, Jennifer J. Rega reiterates that "[f]unding is the biggest problem the EPA faces in carrying out its Agenda," and funding availability will determine how successful the EPA is in implementing their agenda. [FN136] She concludes that "[t]he Agenda will probably be carried out to some degree. Since businesses will be under tighter control if the Agenda is successful, there will be much opposition from industry in certain areas of environmental regulation. It will cost businesses more money to keep up with new, tougher restrictions." [FN137]

2. Office of Children's Health Protection

The EPA and the HHS established the Office of Children's Health Protection (OCHP) [FN138] to support the EPA as it implements the National Agenda, the President's Executive Order, *1123 FQPA, and the 1997 Declaration on Children's Health. The OCHP has four main objectives: (1) to ensure that EPA health standards protect children; (2) to coordinate children's health issues within the EPA and integrate EPA regulations and other actions that affect children's health; (3) to research and set new policies on children's susceptibility and exposure to environmental toxins; and (4) to expand community right-to-know efforts by educating the public on children's environmental health. [FN139] The OCHP suggests that the EPA carry out these objectives by reviewing existing standards to better address children's health issues and improving the regulatory system by considering children's health protection as an integral part of the regulatory development process. [FN140] The OCHP also recommends

that the EPA take an active role in the research process by providing input on research budgets, ensuring independent peer review, facilitating a nexus between research and policy, and identifying and expanding scientific research on child-specific susceptibility and exposure. [FN141] The EPA should also encourage and assist regional and program offices in forging links with external partners and communities on children's environmental health issues and advocate for children's health issues. [FN142]

3. Children's Health Protection Advisory Committee

The Children's Health Protection Advisory Committee (CHPAC) was formed "to advise, consult with, and make recommendations to the [EPA] on issues associated with the development of regulations to address the prevention of adverse health effects to children." [FN143] CHPAC is composed of various representatives of industry, environmental, health, and children's organizations. [FN144] The Committee selected five issues it deemed critical in protecting children's health: mercury, farm worker protection standards, triazine pesticides, organophosphates and carbamates, and air quality/asthma. [FN145] If re-evaluated, these issues *1124 could lead to increased protection of children and environmental health.

a. Five Issues for EPA Reevaluation

Since children were not considered in the original development of the National Emission Standard for Hazardous Air Pollutants (NESHAP) for chloralkali plants, CHPAC selected mercury as the first focus area. [FN146] Mercury is especially hazardous because it enters the environment through both air and water. As previously discussed, children are mainly exposed to mercury by consuming contaminated fish and may suffer neurological, developmental, and reproductive effects. In achieving reduced levels of mercury exposure, CHPAC cautions that resources should not be diverted from other programs which evaluate large sources of mercury. [FN147]

Secondly, since children of farm workers may be exposed to significant quantities of pesticides through employment in farm work, eating fruits and vegetables from pesticide-sprayed fields, and drift from field application of pesticides, CHPAC also recommends focusing on the Farm Worker Protection Standard. [FN148] The current farmworker standard neglects to take children's exposures into account; therefore, the EPA should use its authority under FIFRA to determine if these standards adequately protect children and lactating women by using the best scientific practices as well as age-specific and size-specific weight and height data standards. [FN149]

Thirdly, CHPAC has determined that triazine pesticides exist in drinking water and may lead to cancer and birth defects. [FN150] Consequently, CHPAC recommends using SDWA and FQPA to reconsider pesticide tolerances and drinking water standards to determine the maximum contaminant level (MCL) of such chemicals. [FN151]

*1125 Because three pesticides represent the majority of pesticide risk on food and may disrupt children's developing nervous systems, CHPAC chose these organophosphates and carbamates as the fourth focus area. [FN152] CHPAC suggests standards for re-evaluating these pesticides, taking children and vulnerable subpopulations into account.

Lastly, due to increasing rates of asthma in the United States, CHPAC recommends a comprehensive examination of all aspects of air quality, including indoor air, ambient air, and sulphur dioxide standards. [FN153] CHPAC suggests that the EPA incorporate children's health concerns into all risk assessments and standard setting processes. Specifically, the EPA should ensure that children's unique vulnerabilities are considered when reviewing the National Ambient Air Quality Standard in 2002 and when re-evaluating lead standards in paint, dust, and soil. [FN154]

In addition, the EPA needs to ensure that adequate screening is available for high volume chemicals. According to the Chemical Hazard Data Availability Study published in 1998, "publicly available data on all six basic screening tests necessary for a minimum understanding of a chemical's toxicity are missing for 43% of chemicals used in high volumes in the United States." [FN155]

b. Re-evaluation Standards

When re-evaluating rules and selecting screening criteria, CHPAC suggests that the EPA reevaluate standards if one or more of the following apply:

1. Children's health was not considered in the original development of the standard.

2. Children's health was considered in the original development standard, but new information suggests that the standard inadequately protects children, i.e., the scientific community has a new understanding of exposure routes, the standard does not correctly reflect children's activities, there is new information regarding cumulative effects and toxicity studies, or there are improvements in methodologies and environmental monitoring.

3. A change in the standard would result in significantly improved health outcomes for children.

*1126 4. The proposed revisions will have precedent setting impacts by including children's health in all aspects.

5. Children's health will have a higher priority and inclusion in standard setting.

6. The suggested rules will span a diverse list of hazards and a variety of endpoints.

7. The new rules will be more effective in protecting children's health. [FN156]

4. Agency for Toxic Substances and Disease Registry (ATSDR)

In 1996, the ATSDR, a division of HHS, launched the Child Health Initiative to review the agency's policies. The Initiative revealed that the ATSDR needs to adopt a future-driven mentality and include children's protection and environmental justice in decision-making activities. [FN157] The ATSDR also needs to encourage collaboration between agencies and educate scientists, physicians, community members, teachers, parents, and children. [FN158] The group formulated thirteen different children's health questions that must be addressed in all of ATSDR's public health programs and in every toxicological profile:

1. Are children exposed to potentially harmful substances?
2. Are any exposure pathways unique to children?
3. Do children differ from adults in their weight-adjusted intake of the toxicant?
- *1127 4. Do pharmacokinetic or pharmacodynamic parameters differ between adults and children?
5. What are the effects of multiple and cumulative exposures?
6. Are latent or delayed effects of early exposure possible?
7. At which stage of development is the child exposed?
8. Could any developmental processes be altered by the toxicant?
9. Are there adequate animal models for childhood exposure after birth?
10. What do these models indicate about adverse effects on children who are exposed?
11. Are there transgenerational effects?
12. Are there ethical and cultural consequences unique to children?
13. If children are not included in an agency activity, why are they excluded? [FN159]

The ATSDR also funded referral units where physicians can consult with experts in pediatric toxicology and environmental medicine when faced with a possible environmental illness. The centers are located at the Harborview Medical Center at the University of Washington in Seattle, the Occupational and Environmental Health Center at Cambridge Hospital in Boston, and Mt. Sinai Medical Center in New York. [FN160] The ATSDR also recognizes the need to increase the expertise in children's environmental health and improve how health assessors evaluate children's health issues.

Proposed Legislation

A. The Children's Environmental Protection Act of 1999

As we review the laws of the land which are written today, nowhere is it written that children have the right to a safe and clean environment. Nowhere is it written that children are protected from man-made chemicals that cause cancer; nowhere is it written that the parents of these children and other citizens of this country have the right-to-know what is in the food they eat, the water they drink and the air they breathe. [FN161]

The Children's Environmental Protection Act (CEPA) aims to ***1128** "protect children and other vulnerable subpopulations from exposure to certain environmental pollutants." [FN162] CEPA would amend the Toxic Substances Control Act [FN163] by adding "Title V--Environmental Protection for Children and Other Vulnerable Subpopulations." [FN164]

CEPA would establish as national policy that all EPA environmental and public health standards "must, with an adequate margin of safety, protect children and other vulnerable subpopulations" that are at greater risk from exposure to environmental pollutants. [FN165] Furthermore, CEPA recognizes that the public has a right to know about the dangers pollution presents to children and other vulnerable subpopulations. [FN166] Only products and chemicals on the "safer for children" list, which would be created by the EPA and be easily accessible to the public, would be allowed for use on Federal properties. [FN167]

To facilitate achieving CEPA's objectives, the EPA would also be required to:

(1) ensure that each environmental and public health standard for an environmental pollutant protects children and other vulnerable subpopulations with an adequate margin of safety;

***1129** (2) explicitly evaluate data concerning the special susceptibility and exposure of children to any environmental pollutant for which an environmental or public health standard is established; and

(3) adopt an additional margin of safety of at least 10 fold in the establishment of an environmental or public health standard for an environmental pollutant in the absence of reliable data on toxicity and exposure of the child to an environmental pollutant. . . . [FN168]

CEPA also provides that the Administrator consider all routes by which children may be exposed to pollutants as well as their special susceptibilities when establishing, modifying, or reevaluating public health standards for such pollutants. [FN169] Further, CEPA also requires the Administrator to identify and revise current environmental and public health risks that present risks to children. [FN170]

CEPA also sets forth requirements that schools and day care centers which receive federal funding must "(1) take steps to reduce the exposure of children to pesticides on school grounds, both indoors and outdoors; and (2) provide parents with advance notification of any pesticide application on school grounds" [FN171] CEPA also requires the administrator to identify environmental pollutants reasonably accessible to children, create scientifically peer reviewed lists of substances that present health risks to and substances that are safer for children, help reduce and eliminate children's exposure to environmental pollutants, and create family information kits. [FN172] Lastly, CEPA provides for research on the effects of environmental pollutants on children and creates a Children's Health Protection Advisory Committee. [FN173] Importantly, CEPA also authorizes funds to carry out the Act. [FN174]

***1130** The Children's Environmental Health Network (CEHN) believes CEPA is a step in the right direction to increase the protection of children's health and is very supportive of CEPA. [FN175] CEPA codifies the EPA's goals of protecting children and other vulnerable subpopulations and recognizes their unique vulnerabilities. [FN176] CEPA also establishes a health- protective approach by requiring an additional margin of safety when setting standards, decreases children's exposures to pesticides at schools and day care facilities, and increases the availability of information to the public. [FN177] CEPA requires identification of at least three standards per year for re-evaluation to ensure they adequately protect children. [FN178] CEPA also encourages federal agency support of research in the field of children's environmental health, [FN179] which is necessary to fully understand the impacts environmental substances and toxics have on children's developing systems.

B. The Children's Environmental Protection and Right to Know Act of 1999

In 1999, the Children's Environmental Protection and Right to Know Act was introduced in the House of Representative by Representative Waxman (D-CA). [FN180] This Act would require that within twenty-four months of enactment, the EPA Administrator:

[S]hall establish a threshold for each toxic chemical which the Administrator determines may present a significant risk to children's health or the environment due to its persistence or potential to bioaccumulate or disrupt endocrine systems, or to other characteristics. Such toxic chemicals shall include lead, mercury, dioxin, cadmium, and chromium, and substances listed as bioaccumulative chemicals . . . [FN181]

Additionally, the Act would require seven additional industries to report releases under the Toxic Release Industry (TRI), as required by the Emergency Planning and Community Right-to-Know Act of 1986, [FN182] unless specifically exempted. [FN183] The added industries are metal mining, coal mining, electric utilities, commercial hazardous waste treatment, wholesale chemicals and allied products, wholesale petroleum bulk stations, and solvent recovery services. [FN184] The Act would allow the EPA to mandate compliance from other industries as well. [FN185]

This Act would amend the Federal Hazardous Substances Act (FHSA), [FN186] directing the Secretary of HHS to develop a list of substances which are "toxic due their carcinogenic, neurotoxic, or reproductive toxic effects." [FN187] Additionally, the Act would further amend the FHSA to direct the Secretary to gather information regarding the extent to which "infants and young children are exposed by requiring manufacturers or producers to generate such data and by obtaining existing data from any Federal, State, or local government agency." [FN188] The Act would not preempt any state or local laws; therefore, communities would be free to adopt more rigorous standards to further protect its citizens.

Regarding the right-to-know portion of the bill, the Act would amend the FHSA to require more stringent reporting requirements on the manufacturing and importing of toxic chemicals and allow this information to be easily accessed by the public. [FN189] The industries would be required to provide detailed information regarding employees who are exposed or potentially exposed to toxins. [FN190] Additionally, private citizens could enforce the FHSA; that is, any person could bring a suit against another for failing to comply with the provisions of the FHSA. [FN191] The burden of proof would rest with the person being sued to establish that the substance is not hazardous. [FN192] Although this provision gives private citizens the opportunity to enforce FHSA's provisions, allowing such suits based on a lack of action may lead to delays in accomplishing *1132 the proposed legislation's objectives. [FN193]

If fully implemented, this Act will amend FHSA to improve the availability and quality of information about toxic substances present in the community and possible exposures, helping to protect children's unique vulnerabilities. [FN194] However, the legislation would not change current evaluation standards based on exposures of healthy adult males and would not require the Toxic Substances list to provide information on substances toxic to children, [FN195] thereby perpetuating inaccurate perceptions of how pesticides affect children's health. Additionally, the EPA Administrator can use wide discretion in setting thresholds at which covered facilities must report toxic substances. [FN196] As with other current legislation, this proposed legislation does not authorize increased funding which will be necessary for proper implementation.

C. Defense of the Environment Act of 1999

The Defense of the Environment Act of 1999 would require that all bills, joint resolutions, amendments, or conference reports before Congress, that reduce protection to the environment, conform to certain provisions. [FN197] If a provision before Congress reduces environmental protection by increasing "children's exposure to environmental contaminants and other environmental risks" then a committee must specifically identify and assess the adverse environmental impacts of the action. [FN198] Additionally, the committee must also describe any actions taken to avoid the reduction in environmental protection. [FN199]

*1133 D. Children's Protection and Community Clean Up Act of 1999

The Children's Protection and Community Clean Up Act of 1999 [FN200] would amend the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) [FN201] to include provisions on community participation, human health, right-to-know, environmental justice, and children's environmental health, among other provisions. [FN202] When selecting a remedial action under CERCLA, the bill would require that the President consider "[t]he effectiveness of the remedy in protecting human health and the environment, including

consideration of fetuses, children, and other highly exposed, highly susceptible, or differentially susceptible subpopulations." [FN203] This provision is geared toward ensuring that the President takes children and other vulnerable subpopulations into account when performing clean-up actions of hazardous waste sites.

Additionally, this bill would also require the ATSDR Administrator, together with a peer group, to form a list of hazardous substances present at National Priority List sites that are "known, likely, or suspected health risks to which fetuses and children are especially susceptible." [FN204] The group shall take exposure pathways and different age ranges into account and review the list every two years. [FN205] In addition, the ATSDR Administrator must also prepare toxicological profiles on every toxin included on the list every five years. [FN206] The Act would further amend CERCLA to require that the EPA Administrator or Secretary of HHS "review and revise where necessary, environmental and public health regulations, risk assessment policies and procedures, and guidance documents, issued or used under this Act, to determine whether they consider and fully protect fetal and children's health." [FN207]

***1134** The Act also contains provisions and guidelines for creating and implementing a Children's Environmental Health Research Program, a national Children's Exposure Registry, a Children's Environmental Health Education Program, and Pediatric Peer Review. [FN208]

According to Environmental Defense Fund attorney Karen Florini, the bill "focuses on ensuring that cleanups effectively protect the public, particularly children and other sensitive groups," improving community right-to-know, and adding environmental justice features. [FN209] The bill would require the use of cleanup standards that expressly protect children's health and assure protection of land and water resources. [FN210] The bill also maintains the "polluter pays" approach to assure those responsible clean up their "messes." [FN211]

E. The Right-to-Know-More and Pollution Prevention Act of 1997

The Right-to-Know-More and Pollution Prevention Act of 1997 [FN212] would amend the Emergency Planning and Community Right-to-Know Act of 1986 [FN213] to "expand the public's right to know about toxic chemical use and release [[and] to promote pollution prevention." [FN214] This Act could accomplish this by amending section 313(f) of the Emergency Planning and Community Right-to-Know Act of 1986 by requiring the EPA Administrator to "establish a threshold for each toxic chemical that the Administrator determines may present a significant risk to children's health or the environment because of (i) the tendency of the toxic chemical to persist or to bioaccumulate or disrupt endocrine systems; or (ii) other characteristics of the toxic chemical." [FN215] The Administrator shall also establish thresholds for lead, mercury, dioxin, cadmium, chromium, and other chemicals ***1135** listed in the Federal Register. [FN216] These provisions re-emphasize the importance of children's unique susceptibilities when evaluating toxic chemical thresholds. This Act also provides for detailed reporting requirements and disclosures to increase public awareness and knowledge about toxic chemical use and pollution prevention planning. [FN217]

VII

International Actions

According to the World Health Organization (WHO), up to two-thirds of all preventable illness among children is due to environmental conditions, most of which could be virtually eliminated by environmental improvements, immunization, and proper health care. [FN218] At World Health Day on April 7, 1998, Mr. Klaus Topfer, Executive Director of the United Nations Environment Programme (UNEP), stated that the international community must take action in protecting children's health: "Many of the environmental threats to child health and survival caused by air pollution and chemical contamination of food and water can be considered as 'new diseases of civilization', but they are preventable." [FN219] In response to the advocacy and urging of community and local governments and non-governmental organizations, the international community has started recognizing the impact environmental pollutants have on children's health. [FN220]

***1136** In 1997, eight countries proclaimed the Declaration of the Environmental Leaders of the Eight on Children's Environmental Health. [FN221] The Declaration recognized that "throughout the world, children face significant threats to health from an array of environmental hazards" and are particularly vulnerable to such hazards. [FN222] The leaders affirmed the fact that preventing exposure is the single most effective means of protecting children against environmental threats and pledged to improve protection levels and make children's health a high

priority. [FN223] Additionally, the leaders called upon other international agencies, such as WHO and UNEP, to assist them in raising public awareness. [FN224]

The Declaration mandates that countries employ explicit scientific consideration of children when assessing the risks and setting "acceptable" standards of environmental hazards. [FN225] The countries' leaders also advocate that governments upgrade testing guidelines and consider the effects of children's exposure to multiple toxins over a period of time when setting standards. [FN226] The Declaration suggests that countries focus on reducing children's exposure to lead, [FN227] promoting microbiologically safe drinking water, [FN228] improving air quality, limiting environmental tobacco smoke, minimizing threats from endocrine disrupting chemicals, [FN229] and mitigating the impacts of global climate change. [FN230] The countries pledge to "make the steps agreed upon *1137 in this declaration a priority in domestic action plans, report on . . . progress in carrying out those steps in appropriate international fora and broaden . . . cooperative efforts on children's environmental health with other countries." [FN231]

VIII

Recommendations for Reform

Although Congress and the Executive Branch have demonstrated a commitment to increasing children's environmental health through legislation by specifically considering children's unique vulnerabilities when setting standards, such as FQPA and SDWA, there is still a need for reforms. [FN232]

Funding: Congress must appropriate funds to ensure that the laws designed to protect children adequately do so. Funding is needed to completely research children's environmental hazards and educate the public about present and future risks and dangers.

Cooperation: International, federal, state, local, and tribal governments, as well as inter-governmental agencies, must work together and pool resources to share information on the environmental impacts of children's health. Since pollution knows no boundaries, the international community must cooperate and take collective action to ensure that children live in safe and healthy conditions, regardless of race, ethnicity, geographic location, or socioeconomic status. Governments should develop workable international plans and develop comprehensive guidelines that must be enforced.

Evaluation: We must develop concrete ways of determining how successful the laws and agency guidelines are in protecting children's health. The goals and primary focuses of legislation and regulations must be to eliminate environmental problems that damage children's health, not merely to pass laws that claim to protect children but have no real impact. Children must be considered in all research and risk assessment procedures.

Education: Congress and the Executive Branch must continue *1138 educating parents, teachers, health care professionals, communities, and children themselves so they can evaluate risks and make reasoned choices. All information regarding threats to children's health must be made public in an easy-to-understand and easily accessible format.

Increase Alternatives: The government and private industry must assist the public in protecting children's health by providing acceptable alternative choices to all people, regardless of income. Everyone should have the fundamental right to drink clean water, eat healthy food, breathe clean air, and live in a safe environment. People should not have to pay a premium for pesticide-free food or contaminant-free water. Additionally, all public institutions should serve food that is safe for consumption.

Conclusion

We must continue actively pursuing the goals of ensuring that our children grow up in a safe and healthy environment. Active participation and support of laws which protect children will help to achieve this goal. Additionally, we must review current laws and their effects to ensure children are protected. We should start educating ourselves and our children about the potential dangers of pesticide use, hazardous waste dumps, and increased air pollution to ensure the long and healthy lives of current and future generations. In the words of Carol Browner, "[b]y putting children first, all Americans benefit." [FN233]

[FN1]. Physicians for Social Responsibility (PSR), Children's Health Platform (visited Feb. 6, 1999) <<http://www.psr.org/children.htm>>; see also Children's Health Environmental Coalition (CHEC), Why We Need a Children's Environmental Protection Act (visited Feb. 7, 1999) <<http://www.cheenet.org/action/whycepa.html>> (stating that "virtually all approaches to risk assessment and management are based upon the exposures and susceptibilities of a 155 lb. adult male" and do not account for children's susceptibilities).

[FN2]. Children's Environmental Health Network (CEHN), Chronology of Children's Environmental Health (visited Feb. 14, 1999) <<http://www.cehn.org/cehn/Chronology.html>>. The CEHN is a national, multidisciplinary network dedicated to protecting fetuses and children from environmental hazards. The CEHN consists of experts in medicine, research, nursing, children's issues, and policy who promote a healthy environment for children through research, policy, and education.

[FN3]. Food Quality Protection Act of 1996 (FQPA), Pub. L. No. 104-170, 110 Stat. 1489 (1996) (codified at various sections of 7 U.S.C. § 136, 21 U.S.C. § 301 and 21 U.S.C. § 346a (1994 & Supp. 1998)). Congress unanimously passed the FQPA on Aug. 3, 1996.

[FN4]. Safe Drinking Water Act Amendments (SDWA), Pub. L. No. 104-182, 110 Stat. 1613 (1996) (codified at 42 U.S.C. §§ 300j-21 to -26 (1994 & Supp. 1998)).

[FN5]. Exec. Order No. 13,045, 62 Fed. Reg. 19,885 (1997).

[FN6]. See United States Environmental Protection Agency, EPA's Children's Environmental Health Yearbook 2 (1998) [hereinafter EPA Yearbook].

[FN7]. See 1997 Declaration of the Environment Leaders of the Eight on Children's Environmental Health, (1997) (visited Feb. 7, 1999) <<http://www.epa.gov/children/document/declara.htm>>.

[FN8]. See Klaus Topfer, United Nations Environmental Programme, Environmental Threats to Our Health, Address at World Health Day (Apr. 7, 1998), available at <<http://www.unep.org/unep/per/ipa/pressrel/r04-0698.001>>.

[FN9]. Environmental Pollution and Degradation Causes 40 Percent of Deaths Worldwide, Cornell Study Finds, Cornell News (visited Sept. 30, 1998) <<http://www.news.cornell.edu/releases/Sept98/ecodisease.hrs.html>>. Environmental hazards are a worldwide problem. For example, the lack of sanitary conditions contributes to the death of four million children per year, particularly in undeveloped areas. *Id.* Additionally, global use of agricultural pesticides grew from fifty million kilograms per year in 1945 to current levels of 2.5 billion kilograms per year. *Id.* Modern pesticides are ten times more toxic than those used in the 1940s, ten percent of which are recognized carcinogens. *Id.*

[FN10]. EPA Yearbook, *supra* note 6, at 1; see also Agency for Toxic Substances and Disease Registry (ATSDR), Office of Children's Health, Healthy Children--Toxic Environments: Acting on the Unique Vulnerability of Children Who Dwell Near Hazardous Waste Sites 11-12 (1997) [hereinafter ATSDR Report].

[FN11]. For a brief overview of why children's health is a cause for concern, please refer to CEHN, An Introduction to Children's Environmental Health (visited Feb. 4, 1999) <<http://www.cehn.org/cehn/WhatisPEH.html>>.

[FN12]. Philip J. Landrigan & Joy E. Carlson, Environmental Policy and Children's Health, *The Future of Children*, Summer/Fall 1995, at 3.

[FN13]. Cynthia F. Bearer, Environmental Health Hazards: How Children Are Different from Adults, *The Future of Children*, Summer/Fall 1995, at 5.

[FN14]. See Landrigan, *supra* note 12, at 3; PSR, Pesticides and Children: What Primary Care Physicians Should Know at 1 [hereinafter PSR] (visited Feb. 6, 1999) <<http://www.psr.org/pestkids.htm>>.

[FN15]. Landrigan, *supra* note 12, at 3.

[FN16]. *Id.*

[FN17]. See Lynn R. Goldman, Case Studies of Environmental Risks to Children, *The Future of Children*, Summer/Fall 1995; National Institute of Environmental Health, (NIEHS), Kids 'n' the Environmental Health Sciences: Finding Ways to Help a 'Vulnerable Population', Fact Sheet No. 5 (1997).

[FN18]. See ATSDR Report, *supra* note 10, at 12.

[FN19]. Landrigan, *supra* note 12, at 3.

[FN20]. National Resources Defense Council (NRDC), *Our Children At Risk: The Five Worst Environmental Threats to Their Health*, 3 (1997) [hereinafter NRDC].

[FN21]. EPA Yearbook, *supra* note 6, at 46.

[FN22]. ATSDR Report, *supra* note 10, at 14.

[FN23]. EPA Yearbook, *supra* note 6, at 47.

[FN24]. *Id.*

[FN25]. See, e.g., Amy E. Souchuns, Comment: Old Paint, New Laws: Achieving Effective Compliance with the Residential Lead-Based Paint Hazard Reduction Act, 47 *Cath. U. L. Rev.* 1411 (1998) (discussing laws concerning the reduction of lead-based paint); NRDC, *supra* note 20, at ch. 3.

[FN26]. See *infra* Part III.B.

[FN27]. EPA Yearbook, *supra* note 6, at 10.

[FN28]. See EPA Yearbook, *supra* note 6, at 12; NRDC, *supra* note 20, at Ch. 4. President Clinton strengthened the ozone standard from 120 parts per billion (ppb) averaged over one hour to 80 ppb averaged over eight hours. EPA Yearbook, *supra*, at 12.

[FN29]. EPA Yearbook, *supra* note 6, at 12.

[FN30]. Currently, there are over seventy-five thousand chemicals used in the United States, and we do not have complete data on seventy-five percent of those chemicals. See Lynn R. Goldman, *Chemicals and Children's Environment: What We Don't Know About Risks*, *Environmental Health Perspectives* 106, Supp. 3, June 1998; NRDC, *supra* note 20, at ch. 1.

[FN31]. ATSDR Report, *supra* note 10, at 14.

[FN32]. *Id.* at 83.

[FN33]. *Id.*; see also PSR, *supra* note 14, at 2.

[FN34]. EPA Yearbook, *supra* note 6, at 84; see also PSR, *supra* note 14, at 2.

[FN35]. EPA Yearbook, *supra* note 6, at 84-85.

[FN36]. *Id.* at 85.

[FN37]. Pesticide control, lawn care products, farms, and manufacturing facilities all contribute to the presence of airborne pesticides. *Id.*

[FN38]. *Id.*; see also, NRDC, *supra* note 20, at ch. 5.

[FN39]. See NRDC, *supra* note 20, at ch. 7.

[FN40]. See *id.*; see also EPA Yearbook, *supra* note 6, at 105-06.

[FN41]. NRDC, *supra* note 20, at ch. 7.

[FN42]. Report on Environmental Health Threats to Children Released, Environmental News Network, Sept. 13, 1996, available at <<http://www.enn.com/enn-news-archive/1996>> [hereinafter Environmental News Network].

[FN43]. NIEHS, Low Birthweight, Early Births Found Among Infants Near Hazardous Landfill, NIEHS Adv #17-97 (Sept. 10, 1997), available at <<http://www.niehs.nih.gov/oc/news/landfill.html>> [hereinafter NIEHS].

[FN44]. *Id.*

[FN45]. *Id.*

[FN46]. For further information, please consult the following: Environmental Health Issues (visited Feb. 7, 1999) <<http://www.KidsHealth.org/parent/safety/enviro.html>>; NRDC, *supra* note 20, at ch. 6 (reviewing environmental tobacco smoke); Parent Teachers Association, National PTA Leaders' Guide to Environmental Issues, at sec. 3 (visited Feb. 7, 1999) <<http://www.pta.org>>; Public Interest Research Group, National PIRG Survey Finds Hazardous Toys, Press Release, Nov. 24, 1998, available at <<http://www.igc.org/pirg/consumer/products/toy/98/page/html>> (reviewing the dangers of toys containing toxic plastic polyvinyl chloride (PVC)).

[FN47]. EPA Yearbook, *supra* note 6, at 33.

[FN48]. W. Archie Bleyer, The Changing Epidemiology of Childhood Cancer in the United States, CEHN: Children's Environmental Health: Research Practice, Prevention and Policy Conference Report 9 (Feb. 22, 1997) available at <<http://www.cehn.org/cehn/Resconfrptxt.html#cancer>>.

[FN49]. CEHN, Children's Environmental Health: Research, Practice, Prevention and Policy, CEHN: Children's Environmental Health: Research Practice, Prevention and Policy Conference Report vii (Feb. 21-23, 1997) available at <<http://www.cehn.org/cehn/Resconfrptxt.html#cancer>>.

[FN50]. EPA Yearbook, *supra* note 6, at 33.

[FN51]. CEHN, Childhood Cancer: Fact Sheet from a Congressional Briefing Conducted by the Children's Environmental Health Network (visited Feb. 4, 1999) <<http://www.cehn.org/cehn/CongBriefCancer.html>>.

[FN52]. See generally Bleyer, *supra* note 48, at 29; Leslie L. Robison, Environmental Influences on Childhood Cancer, CEHN: Children's Environmental Health: Research Practice, Prevention and Policy Conference Report 9 (Feb. 22, 1997) available at <<http://www.cehn.org/cehn/Resconfrptxt.html#cancer>>.

[FN53]. See Robison, *supra* note 52, at 9.

[FN54]. See, e.g., EPA Yearbook, *supra* note 6, at 34; Robison, *supra* note 52.

[FN55]. See EPA Yearbook, *supra* note 6, at 83.

[FN56]. *Id.* at 7.

[FN57]. *Id.*

[FN58]. Environmental News Network, *supra* note 42.

[FN59]. EPA Yearbook, *supra* note 6, at 8-10. Common allergens include dust mites, cockroaches, pollen, mold, spores, bacteria, viruses, and pet dander. *Id.* at 9. Nitrogen oxides are emitted from inadequately vented areas, pilot lights, welding, and gas or kerosene heaters. *Id.* Volatile organic compounds are chemicals that may evaporate from cleaning products, adhesives, paint, and wood preservatives. *Id.* See also H. James Wedner, Epidemiology of Asthma, CEHN: Children's Environmental Health: Research Practice, Prevention and Policy Conference Report 6

(Feb. 21, 1997) available at <<http://www.cehn.org/cehn/Resconfrptxt.html#asthma>>.

[FN60]. Hugh A. Tilson, Endocrine Disruptors and Pesticides: Neurodevelopmental Effects, CEHN: Children's Environmental Health: Research Practice, Prevention and Policy Conference Report 11 (Feb. 21, 1997) available at <<http://www.cehn.org/cehn/Resconfrptxt.html#Nevro>>.

[FN61]. Id.

[FN62]. NIEHS, *supra* note 43.

[FN63]. EPA Yearbook, *supra* note 6, at 45.

[FN64]. Id.

[FN65]. Id.

[FN66]. FQPA, Pub. L. No. 104-170, 110 Stat. 1489 (codified at various sections of 7 U.S.C. § 136, 21 U.S.C. § 301 and 21 U.S.C. § 346a (1994 & Supp. 1998)).

[FN67]. For a detailed analysis of the 10-year logjam before the eventual passage of the FQPA, see James Smart, All the Stars in the Heavens Were in the Right Places: The Passage of the Food Quality Protection Act of 1996, 17 *Stan. Envtl. L.J.* 273 (1998).

[FN68]. See National Research Council, *Pesticides in the Diets of Infants and Children* (1993) [hereinafter NRC Report] (1993).

[FN69]. Id. at 7-11; see also Smart, *supra* note 67, at 309.

[FN70]. Federal Food, Drug, and Cosmetic Act (FFDCA), 21 U.S.C. §§ 346- 397 (1994 & Supp. 1998).

[FN71]. Id. § 346a(b)(2)(C). When President Clinton signed the FQPA on August 3, 1996, he called it the "peace of mind" act because it assures parents that their children are eating safe fruits and vegetables. Stephen L. Johnson, *Implementation of the Food Quality Protection Act*, 52 *Food & Drug L.J.* 525, 525 (1997).

[FN72]. General Accounting Office, Resources, Community, and Econ. Dev. Div., *Food Safety: Difficulties in Assessing Pesticide Risks and Benefits* GAO/T-RCED-92-33 at 3 (Feb. 26, 1992). A "pesticide chemical residue" is a "residue in or on raw agricultural commodity or processed food of: (A) a pesticide chemical; or (B) any other added substance that is present on or in the commodity or food primarily as a result of the metabolism or other degradation of a pesticide chemical." 21 U.S.C. § 321(q)(2). A "pesticide chemical" is defined as "any substance that is a pesticide within the meaning of the Federal Insecticide, Fungicide, and Rodenticide Act, including all active and inert ingredients of such pesticide." Id. § 321(q)(1); see *Federal Insecticide, Fungicide, and Rodenticide Act*, Pub. L. No. 80-104, 61 Stat. 163 (1947) (codified at 7 U.S.C. §§ 136-136y (1994 & Supp. 1998)).

[FN73]. 21 U.S.C. § 346a(b)(2)(C)(i).

[FN74]. Id.

[FN75]. 21 U.S.C. § 346a(b)(2)(C)(ii).

[FN76]. Id. § 346a(b)(2)(C). This differs from the general rule stating that the Administrator may establish a tolerance that is "safe," defined as "a reasonable certainty that no harm will result from aggregate exposure to the pesticide chemical residue, including all anticipated dietary exposures and all other exposures for which there is reliable information." Id. § 346a(b)(2)(A)(ii).

[FN77]. EPA, 1996 Food Quality Protection Act: Draft Implementation Plan 12 (March 1997).

[FN78]. Id.

[FN79]. Id.

[FN80]. Katherin Day Lassila, A Look at the New Public Health Laws: Matter of Opinion, The Amicus Journal, Environmental News Network (visited Feb. 12, 1999) <<http://www.enn.com/enn-news-archive/1997/01/012297/feature.asp>>.

[FN81]. Id.

[FN82]. Scott Douglas Bauer, Note, The Food Quality Protection Act of 1996: Replacing Old Impracticalities with New Uncertainties in Pesticide Regulation, 75 N.C. L. Rev. 1369, 1389 (1997); see also Lynn R. Goldman, Food Quality Protection Act of 1996: New Directions in Public Health Protection, Address to The American Crop Protection Association and McKenna and Cuneo (Sept. 10, 1996), available at <<http://www.epa.gov/opppsp1/fqpa/sphgold1.htm>> (discussing the need to revamp the regulatory system).

[FN83]. On February 12, 1999, the Senate resolved, with the concurrence of the House of Representatives, that the EPA Administrator and Secretary of Agriculture should ensure the implementation of the FQPA Amendments "(A) be based on sound science that protects public health; (B) include transparent processes with full disclosure of decisions and be subject to peer and public review; (C) provide for a reasonable transition for agriculture; and (D) require consultation with the public and other agencies...." S. Con. Res. 11, 106th Cong. § 1 (1999). This resolution was made to guarantee the fair and equitable implementation of the FQPA by protecting the health and well-being of children while "maintaining an abundant, affordable, and safe food supply for the United States." Id. However, the Resolution seems to emphasize protecting the health of the farming industry more than protecting the health of children.

[FN84]. CEHN, 10X Margin of Safety (FQPA) Network News Release: EPA Must Uphold Safety Margin for Kids in Regulating Pesticides, Health Groups Say (visited Dec. 8, 1998) <<http://www.cehn.org/cehn/Chronology.html>>.

[FN85]. EPA, Food Quality Protection Act FFDC A Amendments sec. 405(b) (visited Jan. 18, 1999) <<http://epa.gov/opppsp1/fqpa/fqpaaffdc.htm>>.

[FN86]. Letter from Robert K. Musil, Executive Director, Physicians for Social Responsibility, to President William J. Clinton (April 7, 1998) available at <<http://www.psr.org/fqpa.htm>>.

[FN87]. Id.

[FN88]. CHEC, The CHEC Report (visited Feb. 7, 1999) available at <<http://www.checnet.org/chec/checreport/index.html>>. Although the FQPA provided the EPA with twelve million dollars from 1997-1999 for increased monitoring, the Act allocates no funding for data generation. FQPA, Pub. L. No. 104-170, 110 Stat. 1489, 1535, § 406 (1986).

[FN89]. See Bauer, *supra* note 82, at 1371 n.19.

[FN90]. Id. at 1397.

[FN91]. Id. at 1400.

[FN92]. See 21 U.S.C. § 346a(d).

[FN93]. See also Frank B. Cross, The Consequences of Consensus: Dangerous Compromises of the Food Quality Protection Act, 75 Wash. U. L.Q. 1155, 1203-05 (1997) (concluding that the "need for government regulation [of pesticides] is not terribly strong" but is necessary to protect consumers who do not have the capabilities to research and evaluate the risks and benefits of pesticides. He notes that the health concerns about pesticide residues are often overblown and argues that the FQPA is a law of paradoxes which shifts the risk of pesticides exposure from the general public to farmworkers and poor).

[FN94]. Andrew J. Miller, The Food Quality Protection Act of 1996: Science and Law at a Crossroads, 7 Duke Envtl. L. & Pol'y F. 393, 419 (1997) (analyzing the fundamental shift represented by the FQPA in stepping away from bright-line rules to allow scientific evidence to mesh with policy decisions and quantify risks and benefits).

[FN95]. Safe Drinking Water Act Amendments (SDWA), Pub. L. No. 104-182, 110 Stat. 1613, § 3(1) (codified at 42 U.S.C. §§ 300f to 300j-21 (1994 & Supp. 1998)).

[FN96]. Id.

[FN97]. Id.

[FN98]. Id. §§ 3(6), 3(8).

[FN99]. Lassila, *supra* note 80.

[FN100]. Id.

[FN101]. 42 U.S.C. § 300g-1(b)(1)(A) (1994 & Supp. 1998).

[FN102]. Id. § 300g-1(b)(B)(1)(i), (ii).

[FN103]. Id. § 300g-1(b)(1)(C).

[FN104]. Id. § 300g-1(b)(3)(A)(i).

[FN105]. Id. § 300-1g(b)(3)(C).

[FN106]. Id. § 300g-1(b)(3)(C)(i)(V).

[FN107]. Id. § 300g-1(b)(3)(C)(i)(VI), (i) (VII), (ii), (iii).

[FN108]. Carol M. Browner, Address before the Committee on Environment and Public Works, U.S. Senate (Feb. 24, 1999), available at <[http:// www.epa.gov/ocirpage/testimony/022499cmb.htm](http://www.epa.gov/ocirpage/testimony/022499cmb.htm)>.

[FN109]. NRDC, *supra* note 20, at ch. 7.

[FN110]. Exec. Order No. 13,045, 62 Fed. Reg. 19,885 (1997).

[FN111]. Id. § 1-101(a)-(b).

[FN112]. Id. § 2-202(a); see also EPA, EPA's Rule Writer's Guide to Executive Order 13045 (visited Jan. 12, 1999), <[http:// www.epa.gov/children/whatwe/rrguide.pdf](http://www.epa.gov/children/whatwe/rrguide.pdf)>.

[FN113]. Exec. Order No. 13,045, § 2-202.

[FN114]. See Exec. Order No. 12,866 58 Fed. Reg. 51,735 (1993) (describing which regulatory actions must be submitted to the Office of Information and Regulatory Affairs (OIRA)).

[FN115]. Exec. Order No. 13,045, § 5-501(a)-(b).

[FN116]. Id. § 3-303(a), (b).

[FN117]. Id. § 3-304(a)-(f).

[FN118]. ATSDR, National Progress in Children's Environmental Health and Safety (visited Feb. 4, 1999) <<http://atsdr1.atsdr.cdc.gov:8080/child/whatsnew.html taskforce>>.

[FN119]. Id.

[FN120]. Id.

[FN121]. Id.

[FN122]. The following six research centers will focus on asthma:

The University of Southern California, Department of Preventive Medicine, Los Angeles, will study the impact of second hand smoke and other environmental health threats to the development of asthma in children.

The University of Iowa, College of Medicine, Iowa City, will study respiratory illnesses in children from rural communities.

The University of Michigan, School of Public Health, Ann Arbor, will research how environmental factors contribute to pediatric asthma.

Johns Hopkins University, School of Medicine, Baltimore, will determine how air pollutants effect the rising asthma rates among inner city children.

Mt. Sinai School of Medicine, New York, will identify, characterize, and prevent developmental effects among inner city children that result from exposures to pollutants that occur in their diets and homes.

Columbia University, School of Public Health, New York, will research the relationship between environmental pollutants, including particulate matter and environmental tobacco smoke, and the incidence of asthma among inner city children. Columbia University will also develop a community intervention program to increase the communities' awareness and knowledge of environmental hazards.

In addition, two centers will research the effects of pesticide exposure on children, including effects on the endocrine system, reduction in intellectual development, and damage to the central nervous system:

The University of California at Berkeley, School of Public Health, Berkeley, will study the impact of pesticide exposure on children's growth and development.

The University of Washington, Department of Environmental Health, Seattle, will research the special vulnerability of children to health risks from pesticides in conjunction with the Washington State Migrant Council. EPA, Clinton Administration Establishes First-Ever Centers to Study Environmental Threats to Children, August 1998 (visited Feb. 4, 1999) <[http:// www.epa.gov/children/second/press.htm](http://www.epa.gov/children/second/press.htm)>.

[FN123]. Carol M. Browner, Proposal for Environmental Regulatory Reform Colloquium: Environmental Regulatory Reform, 15 Pace Env'tl. L. Rev. 45, 46 (1997).

[FN124]. Id. at 49.

[FN125]. Id. at 47.

[FN126]. Id. at 48.

[FN127]. EPA, EPA Strategic Plan 34, 35 (1997).

[FN128]. Id.

[FN129]. Id.

[FN130]. Id.

[FN131]. EPA Yearbook, *supra* note 6, at 2.

[FN132]. Id. at 120-40.

[FN133]. Miller, *supra* note 94, at 425.

[FN134]. Id.

[FN135]. Id.

[FN136]. Jennifer J. Rega, The EPA's National Agenda to Protect Children's Health from Environmental Threats: The Trend to Better Protect Our Nation's Children from Environmental Health Hazards, 7 Dick. J. Env'tl. L. & Pol'y 119, 142 (1998).

[FN137]. Id. at 143.

[FN138]. ATSDR, Other Federal Actions for Children's Environmental Health, (visited Feb. 4, 1999) <<http://atsdr.cdc.gov/child/whatsnew.html>>.

[FN139]. Id.

[FN140]. EPA Strategic Plan, *supra* note 127, at 81.

[FN141]. Id.

[FN142]. Id. at 82.

[FN143]. J. Routt Reigart, Report of the Children's Health Protection Advisory Committee to the U.S. Environmental Protection Agency Regarding The Selection of Five Regulations for Re-Evaluation, May 28, 1998, available at <<http://www.epa.gov/children/whatwe/reg-rprt.htm>>.

[FN144]. Id.

[FN145]. See Response to Recommendations from the Children's Health Protection Advisory Committee Regarding Evaluation of Existing Environmental Standards, 64 Fed. Reg. 5,277-84 (1999).

[FN146]. Reigart, *supra* note 143.

[FN147]. Id. CHPAC also recommends focusing on water quality criteria standards, a regulatory determination for electric (coal-burning) utility boilers, hazardous waste combustion rule, medical waste combustion rule, and the municipal waste combustion rule. Id.

[FN148]. Id.

[FN149]. Id.

[FN150]. Id.

[FN151]. Id.

[FN152]. Id. The three pesticides are methyl parathion, dimethoate, and chlorpyrifos. Id.

[FN153]. Id.

[FN154]. Id.

[FN155]. Id.

[FN156]. Id.

[FN157]. Although environmental justice issues play a significant role in protecting poor and minority children from environmental hazards, such a discussion is beyond the scope of this article. See, e.g., ATSDR: Office of Children's Health, Child Health Workgroup, Healthy Children--Toxic Environments: Acting on the Unique Vulnerability of Children Who Dwell Near Hazardous Waste Sites, Address before the Board of Scientific Counselors (Apr. 28, 1997) at 18-20, available at <<http://www.atsdr.cdc.gov/child/chw497.html>>; EPA Yearbook, *supra* note 6, at 4 ("[P]rinciples of environmental justice--that all people must have the opportunity to live in a healthy environment and that environmental laws apply without discrimination based on race, ethnicity, culture, or economic status--guide EPA's efforts to increase and improve access to education programs for the poor, immigrants, and ethnic and racial minorities."); Robert D. Bullard, Childhood Asthma: Environmental Justice Community Perspectives, CEHN: Research, Practice, Prevention and Policy Conference Report 37-38 (Feb. 21, 1997), available at <<http://www.cehn.org/cehn/Resconfprtxt.html#Ack>>; Landrigan, *supra* note 12, at 17-19 (noting that poor children and those of color are often disproportionately exposed to toxic environmental hazards, including lead, air pollution and effluvia from toxic waste sites; this requires a more equitable distribution of

hazardous waste facilities); Kenneth Olden, Environmental Justice and Children's Health, CEHN: Research, Practice, Prevention and Policy Conference Report 38-39 (Feb. 21, 1997), available at <<http://www.cehn.org/cehn/Resconfprtxt.html#Ack>>.

[FN158]. Reigart, *supra* note 143, at 6-7.

[FN159]. *Id.* at 9.

[FN160]. ATSDR, ATSDR Funds Referral Units for Children, (visited Feb. 4, 1999) <<http://atsdr.cdc.gov/child>>.

[FN161]. The Children's Environmental Protection Act: Hearing on S. 599 Before the U.S. House of Representatives, 105th Cong. (1997) (testimony of Nancy Chuda, co-founder of the Children's Health Environmental Coalition). Senate Bill 599 was reintroduced on May 24, 1999, as Senate Bill 1112 by Senators Boxer (D-CA) and Lautenberg (D-NJ).

[FN162]. S. 1112, 106th Cong. (1999). The bill was read twice before being referred to the Committee on Environment and Public Works. See also H.R. 2451, 105th Cong. (1997), a companion bill to S. 599 in the U.S. House of Representatives, sponsored by Rep. Moran (D-VA). H.R. 2451 was referred to the House Committee on Commerce on Sept. 10, 1997, and subsequently referred to the Subcommittee on Finance and Hazardous Materials on Sept. 19, 1997. Representative Moran re-introduced the bill as H.R. 199 on Jan. 6, 1999.

[FN163]. Toxic Substances Control Act (TSCA), 15 U.S.C. §§ 2601-2692 (1994 & Supp. 1998).

[FN164]. S. 1112 § 2 (1999); see also H.R. 199, 106th Cong. § 2 (1999).

[FN165]. S. 1112 § 2 (adding § 501(b)(2) to TSCA); see also H.R. 199 § 2 (adding § 501(b)(2) to TSCA). CEPA defines "children" as "18 years of age or younger." S. 1112 §§ 2, 502(1). "Environmental pollutant" means:

A hazardous substance subject to regulation under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. 9601), a drinking water contaminant subject to regulation under the Safe Drinking Water Act (42 U.S.C. 300f et seq.), an air pollutant subject to regulation under the Clean Air Act (42 U.S.C. 7401 et seq.), a water pollutant subject to regulation under the Federal Water Pollution Control Act (33 U.S.C. 1251 et seq.), and a pesticide subject to regulation under the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. 136 et seq.).

S. 1112 §§ 2, 502(3); see also H.R. 199 § 2.

[FN166]. H.R. 199 § 2 (adding § 501(b)(2) to TSCA); S. 1112 § 2 (adding § 501(b)(1) to TSCA).

[FN167]. H.R. 199 § 2 (adding § 501(b)(2) to TSCA).

[FN168]. S. 1112 § 2 (adding § 503(a)(1) to TSCA).

[FN169]. *Id.* (adding § 503(b) to TSCA).

[FN170]. See *id.* (adding § 503(c) to TSCA).

[FN171]. *Id.* (adding § 504(a) to TSCA); see also School Environment Protection Act of 1999, H.R. 3275, 106th Cong. (1999); S. 2109, 106th Cong. (2000). The School Environment Protection Act amends FIFRA to "require local educational agencies and schools to implement integrated pest management systems to minimize the use of pesticides in schools, and to provide parents, guardians, and employees with notice of the use of pesticides in schools" *Id.*

[FN172]. H.R. 199 § 2 (adding § 503(b) to TSCA); S. 1112, § 2 (adding § 503(b) to TSCA).

[FN173]. H.R. 199 § 2 (adding § 506 to TSCA); S. 1112 § 4 (adding § 506 to TSCA), § 5 (adding § 507 to TSCA).

[FN174]. S. 1112 § 5 (adding § 508 to TSCA).

[FN175]. CEHN, Analysis of S. 1112: The Children's Environmental Protection Act (visited April 9, 2000) <<http://www.cehn.org/cehn/S1112analysis.html>>.

[FN176]. Id.

[FN177]. Id.

[FN178]. Id.

[FN179]. Id.

[FN180]. H.R. 1657, 106th Cong. (1999).

[FN181]. H.R. 1657 § 101(a)(C)(i); see 60 Fed. Reg. 15393 (1995) (listing bioaccumulative chemicals) (to be codified at 40 C.F.R. pts. 9, 122, 123, 131, 132).

[FN182]. See 42 U.S.C. § 11023 (1994 & Supp. 1998).

[FN183]. See Analysis of H.R. 1636: The Children's Environmental Protection and Right-to-Know Act of 1997 (visited Feb. 4, 1999) <<http://www.cehn.org/cehn/HR1636analysis.html>>.

[FN184]. Id.

[FN185]. Id.

[FN186]. See 15 U.S.C. § 1261 (1994 & Supp. 1998).

[FN187]. H.R. 1657, 106th Cong. § 111.

[FN188]. Id.

[FN189]. Id. § 112(a).

[FN190]. Id.

[FN191]. Id. § 114.

[FN192]. Id.

[FN193]. CEHN, Chronology of Children's Environmental Health (visited Feb. 14, 1999) <<http://www.cehn.org/cehn/Chronology.html>>.

[FN194]. Id.

[FN195]. Id.

[FN196]. Id.

[FN197]. H.R. 525, 106th Cong. § 3(a) (1999). The Defense of the Environment Act was introduced by Rep. Waxman (D-CA) and has 102 co-sponsors.

[FN198]. H.R. 525 §§ 3(b)(3), 4. Additionally, the Act would also require that provisions before Congress comply with the reporting assessments if such provisions reduce environmental protection by (1) allowing "increased pollution of ambient air, indoor air, surface water, ground water, the oceans, or other terrestrial or aquatic resources"; (2) causing "adverse impacts on the environmental quality of national parks or other public lands," including reducing the quality or quantity of outdoor recreational activities; (3) diminishing the protection of species that may be endangered; or (4) shielding violators of environmental laws from penalties or limiting judicial review of agency action. H.R. 525 § 3(b), (c).

[FN199]. H.R. 525 § 4(a)(3).

[FN200]. H.R. 2956, 106th Cong. (1999).

[FN201]. 42 U.S.C. §§ 9601-9657 (1994 & Supp. 1998).

[FN202]. H.R. 2956. The bill was introduced by Representatives Pallone (D- NJ) and Lewis (D-GA) and includes amending CERCLA by adding provisions for community participation, disclosure requirements, environmental justice, brownfield remediation and environmental cleanup, natural resource damages, federal facilities, liability, and funding.

[FN203]. Id. § 101(a).

[FN204]. Id. § 501(a) (adding § 127(a)(1) to CERCLA).

[FN205]. Id.

[FN206]. Id. (adding § 127(a)(3) to CERCLA).

[FN207]. Id. (adding § 127(b)(1) to CERCLA).

[FN208]. Id. (adding § 127(d)-(g) to CERCLA).

[FN209]. Environmental Defense Fund, EDF Applauds Children's Protection and Community Clean-Up Act, Sept. 29, 1999, available at <[http:// www.edf.org/pubs/newsreleases/1999/Sep/d_children.html](http://www.edf.org/pubs/newsreleases/1999/Sep/d_children.html)>.

[FN210]. Id.

[FN211]. Id.

[FN212]. S. 769, 105th Cong. (1997).

[FN213]. See 42 U.S.C. § 11023(f) (1994 & Supp. 1998).

[FN214]. S. 769 (stating the purpose of the bill).

[FN215]. S. 769 § 101(a)(3)(A).

[FN216]. Id. § 101(a)(3)(B). Refer to 60 Fed. Reg. 15,393 for additional bioaccumulative chemicals of concern for which thresholds will be established.

[FN217]. See generally S. 769 §§ 101-05, 201-06.

[FN218]. World Health Organization, Sustainable Development and Healthy Environmental, Programme for the Promotion of Environmental Health, slide 7 (visited Feb. 12, 1999) <[http:// www.who.int/peh/facts_figures/7.htm](http://www.who.int/peh/facts_figures/7.htm)>.

[FN219]. Topfer, *supra* note 8.

[FN220]. UNEP has developed an environmental law program with the goal of achieving the following objectives:

- . to promote international consensus building through the coherent development of international legal instruments, emphasizing their effective implementation and compliance;
- . to progressively develop international environmental law, including new concepts and principles in international law aiming at sustainable development;
- . to provide technical and legal assistance to developing countries and countries with economies in transition for strengthening national environmental legislation; ... and
- . to promote legal training and information dissemination.

About the UNEP Environmental Law Programme (visited Feb. 12, 1999) <<http://www.unep.org/unep/program/global/elu/internet.htm>>.

[FN221]. 1997 Declaration of the Environment Leaders of the Eight on Children's Environmental Health (1997) (visited Feb. 7, 1999) <<http://www.epa.gov/children/document/declara.htm>>.

[FN222]. Id.

[FN223]. Id.

[FN224]. Id.

[FN225]. Id.

[FN226]. Id.

[FN227]. Id. The Declaration aims to fulfill and promote the OECD Declaration on Lead Risk Reduction by reducing children's blood lead level to ten micrograms per deciliter. Id.

[FN228]. Id. Currently, approximately four million children die annually due to diarrheal diseases contracted from drinking contaminated water. Id.

[FN229]. Id. As the long-term impacts of endocrine disrupting chemicals are not yet completely known or understood, the Leaders suggest that the countries compile an international inventory of research activities, develop an international assessment on the state of the research, identify and prioritize research needs and data gaps, and cooperatively develop risk management strategies and pollution prevention techniques. Id.

[FN230]. Id. According to the Intergovernmental Panel on Climate Change, "[c]limate change is likely to have wide-ranging and mostly adverse impacts on human health, with significant loss of life." Id. The Declaration concludes that since "[c]hildren will be among the most susceptible to more severe heat waves, more intense air pollution, and the spread of infectious disease," slowing the climate change and its adverse impacts is crucial to protecting children's health. Id.

[FN231]. Id.

[FN232]. See also Landrigan, *supra* note 12 at 21; NRDC, *supra* note 20; Carol Stroebel, Protecting Children from Environmental Contaminants Through Policy, *Health & Env'tl. Dig.*, vol. 12, no. 2 (Feb. 1998).

[FN233]. Carol Browner, Keynote Address, CEHN: Pediatric Environmental Health Research Conference Report 21 (Feb. 21, 1997) available at <<http://www.cehn.org/cehn/Resconfprtst.html#Ack>>.

[FNa1]. Third-year law student, University of Oregon School of Law. Articles Editor, *Oregon Law Review*, 1999-2000.